Combination of breast milk and babies’ saliva shapes healthy oral microbiome, study suggests

By DTI

BRISBANE, Australia: There is much debate of the pros and cons of breast- and bottle-feeding. A research team from the Queensland University of Technology (QUT), in collaboration with the University of Queensland, both in Australia, has found that breastfeeding, at least in terms of oral health of the baby, is beneficial. According to lead author Dr Emma Sweeney, from the Institute of Health and Biomedical Innovation at QUT, the team’s earlier studies had found significant differences in the prevalence of key bacteria in the mouths of breastfed and formula-fed babies and that breastmilk and saliva interactions boost innate immunity by acting in synergy to regulate the oral microbiome of newborn babies.

For the recent study, a variety of microorganisms were exposed to breastmilk and saliva mixtures. The results showed that inhibited growth of the microorganisms took place immediately and for up to one day regardless of whether the microorganisms were considered pathogenic or commensal in an infant’s mouth.

“Our findings suggest that breastmilk is more than a simple source of nutrition for babies because it plays an important role in shaping a healthy oral microbiome,” said Sweeney. “Our previous research found that the interaction of neonatal saliva and breast milk releases antibacterial compounds, including hydrogen peroxide. The release of this chemical compound also activates the lactoperoxidase system, which produces additional compounds that also have antibacterial activity, and these compounds are capable of regulating the growth of microorganisms,” she added.

According to the research team, the composition of a baby’s mouth microbiota has an important role in its health and well-being and also has an impact on infections and diseases in babies’ early lives.

The study, titled “The effect of breastmilk and saliva combinations on the in vitro growth of oral pathogenic and commensal microorganisms”, was published online in Scientific Reports on 11 October 2018.

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A recent study conducted by the Queensland University of Technology demonstrated that breastfeeding improves the oral immune system of newborns. (Photograph: wong sze yuen/Shutterstock)
University of Otago receives NZ$10 million to aid construction of new dental clinic

By DTI

DUNEDIN, New Zealand: As reported by Dental Tribune in September, the University of Otago announced that it would be building a dental teaching facility and patient treatment clinic in South Auckland. In a positive new development, internationally renowned businessman and philanthropist Graeme Hart and his wife Robyn have announced that they will be donating NZ$10 million towards the clinic’s construction.

The University of Otago Foundation Trust Chair John Ward said, "This funding will make a significant contribution to the development of a new dental teaching facility, which will not only provide students with diverse practical learning opportunities, but will also provide dental care for the local diverse communities at a highly accessible cost."

The NZ$28.2 million, two-storey, 32-chair building will be built at the Counties Manukau District Health Board’s Super Clinic’s site. With 48 final-year dentistry students assigned to the South Auckland clinic at any one time, the clinic will follow the long-standing social contract model that operates successfully in Dunedin, whereby patients receive treatment provided by students under supervision at a very accessible cost.

Hart, who lives in Auckland, was awarded an honorary Doctor of Commerce degree by the university last December in recognition of his contribution to the business sector and for his philanthropy in supporting education and children’s health. "We are delighted to be able to assist our university in providing a dental school that will meet the needs of lower socio-economic groups. We are very pleased that the youth and young children of this region will benefit from this facility," Hart commented.

"The University of Otago remains highly committed to providing outstanding education and to contributing to the communities where our campuses are located. The Hart family’s donation will allow us to proceed with certainty on the development of our dental teaching facility in the Counties Manukau region and it will assist us in making a substantial positive difference to the healthcare and wider wellbeing of residents of New Zealand’s largest city," said University of Otago Vice-Chancellor Harlene Hayne.

The donation is the most significant single donation in the University’s near 150-year existence.

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Survey of Australian dentists’ fees indicates a small increase

By DTI

SYDNEY, Australia: Each year, the Australian Dental Association (ADA) conducts a dental fee survey to gain a better understanding of how private practices across the country are billing for their work. According to this year’s results, pricing has remained relatively stable, with only a small increase. However, as seen in previous surveys, there were significant variations in the different levels of fees that are charged, both within and between different states.

The survey, conducted by ACA Research, summarises the fees charged by ADA members in private practice as at 1 July 2018. According to the ADA, there were 537 more practitioners who took part this year than last year, with a total of 1,740 valid responses received. The total participants were broken down into 1,454 general practitioners (GPs) and 286 specialist dentists.

The fees charged by GPs remained relatively stable from 1 July 2017 to 30 June 2018 across the 121 items that were surveyed. However, there has been a continuous upward trend over the past five years. In line with the Consumer Price Index, the accumulative year-on-year increase in fees over the previous five years is eight per cent. Additionally, the changes in fees charged by GPs varied across all different service categories, with the highest increase in GP fees was noted for general dental services (11.6 per cent). Periodontics saw a decrease of 4.5 per cent, whereas preventive services and oral surgery went down 0.4 per cent and 0.3 per cent, respectively.

As with previous years’ surveys, less than a quarter of GPs reported charging an hourly rate for their services. For the 23 per cent who do, the average rate billed was A$469 an hour, which is a four per cent increase from the previous A$449 an hour that was reported in 2017. On average, GPs in Western Australia charged the lowest fees, while GPs in Australia Capital Territory (ACT) and Tasmania charged the highest.

The ADA did however warn that due to the small sample sizes in the ACT and Tasmania, these results should be regarded with caution. On average, GPs in Victoria charged the highest mean hourly rate of A$534, while their counterparts in South Australia charged the lowest mean hourly rate of A$560. Generally, GPs in the state capitals charged a higher fee for the same item of service than GPs in the rest of the state.

Approximately 11 per cent of private practice dentists in Australia are specialists. From the 286 specialists surveyed in this year’s survey, 29 per cent charged an average hourly rate of A$632, which increased from A$559 in the 2017 survey. Specialists in New South Wales charged the highest average hourly rate of A$684, while specialists in South Australia charged the lowest rate of A$400. However, these results should be also be regarded with caution, due to the relatively small number of specialists included in the survey results, according to the ADA.